In the Claims

Claims are amended as follows:

1 to 16 (cancelled)

17. (previously presented) A telecommunications system comprising:

a packet mode switch fabric;

a source device and a destination device, said source device being connected to said destination device by a channel through the switch fabric and traffic data from said source device to said destination device being carried as a stream of packets on said through channel; and

a switch means for replicating said stream of packets and communicating said replicated packet stream to a network service provider device located within said packet mode switch fabric over a channel connecting the through channel to the network service provider device, said network service provider device being arranged to process said replicated packet stream and to generate in response to said processing service data relating to said traffic data and to provide said service data in a packet stream to said switch means for switching into said stream of packets being carried on said through channel.

18. (previously presented) A telecommunications system as claimed in claim 17, wherein said stream of packets on said through channel comprises a call between the source device and the destination device and wherein the step of replicating the stream of packets includes only performing replication of the stream of packets in association with a call activity.

19. (previously presented) A telecommunications system as claimed in claim 18, wherein replication of the stream of packets is performed in association with a call activity comprising one of tone reception/generation, facsimile demodulation, echo cancellation and call announcement generation.

20. (previously presented) A telecommunications system as claimed in claim 17, wherein traffic data is carried bi-directionally between the source device and the destination device by first and second packet streams on respective first and second channels and said switch means for replicating replicates each of said first and second packet streams and communicates the replicated streams to the network service provider device on respective connecting channels.

21. (previously presented) A telecommunications system as claimed in claim 17, wherein said switch means for replicating the stream of packets comprises a switch.

22. (previously presented) A telecommunications system as claimed in claim 17, wherein the switch fabric comprises a packet mode switch.

23. (previously presented) A telecommunications system as claimed in claim 17, wherein said switch fabric comprises a network having:

a plurality of interconnected switching devices; and

an access network comprising a plurality of circuits and a plurality of network service provider devices connected to said switching devices, wherein said means for replicating the stream of packets comprises one of said switching devices.

24. (previously presented) A telecommunications system as claimed in claim 23, wherein said through channel comprises a packet stream part of an end to end circuit across the network, said circuit extending through a time division multiplexed (TDM) access channel on a source device side of the network, through said packet stream channel and through a TDM access channel on a destination device side of the network, said switching devices including adaptation devices for converting traffic data between a TDM mode and a packet stream mode.

25. (previously presented) A telecommunications system as claimed in claim 24, wherein said end to end circuit between said source device and said destination

device comprises first and second channels carrying respective first and second packet streams and said switch means for replicating the packet stream replicates each of said first and second packet streams and directs each of them on respective connecting channels to the network service provider device.

26. (previously presented) A telecommunications system as claimed in claim 17, wherein said switch means for replicating the stream of packets broadcasts said replicated stream of packets to a plurality of network service provider devices on respective connecting channels.

27. (previously presented) A telecommunications system as claimed in claim 17, wherein said network service provider device comprises a voice processing device.

28. (previously presented) A telecommunications system as claimed in claim 17, wherein said network service provider device comprises an intelligent peripheral device.

29. (cancelled)

30. (previously presented) A telecommunications system as claimed in claim 17, wherein said through channel comprises a circuit switched connection through the switch fabric between the source device and the destination device.

31. (previously presented) A telecommunications system as claimed in claim 17, wherein the network service provider device is co-located with the replicating means.

32. (previously presented) A telecommunications system comprising:

a circuit switched switching network;

a source device and a destination device, said source device being connected to said destination device by a circuit switched connection through the switching network, said circuit switched connection having a packet mode portion for carrying traffic data from the source device to the destination device as a packet stream; and

a switch element for replicating said stream of packets at said packet mode portion of the circuit switched connection and communicating said replicated packet stream to another circuit at said packet mode portion of the circuit switched connection, said another circuit comprising a service provider circuit, said service provider circuit being arranged to process said replicated packet stream and to generate in response to said processing service data relating to said traffic data and to provide said service data in a packet stream to said switch element for switching into said stream of packets being carried on said packet mode portion.

33. (previously presented) A telecommunications system as claimed in claim 32, wherein said stream of packets on said packet mode portion comprises a call between the source device and the destination device and wherein the step of replicating the stream of packets includes only performing replication of the stream of packets in association with a call activity.

34. (previously presented) A telecommunications system as claimed in claim 33, wherein replication of the stream of packets is performed in association with a call activity comprising one of tone reception/generation, facsimile demodulation, echo cancellation and call announcement generation.

35. (previously presented) A telecommunications system as claimed in claim 32, wherein said replicated stream of packets is communicated to a network service provider device on a packet mode circuit connecting the network service provider device to the packet mode portion of the circuit switched connection.

36. (previously presented) A telecommunications system as claimed in claim 35, wherein the network service provider device comprises a voice processing device.

37. (previously presented) A telecommunications system as claimed in claim 35, wherein the network service provider device is co-located with the switching element.

38. (currently amended) A telecommunications system as claimed in claim 35, wherein the network service provider device ~~is co-located with the switching element~~comprises an intelligent peripheral device.

39. (previously presented) A telecommunications system as claimed in claim 32, wherein traffic data is carried bi-directionally between the source device and the destination device by first and second packet streams on respective first and second channels of the packet mode portion of the circuit switched connection and said switch element for replicating replicates each of said first and second packet streams and communicates the replicated streams to the network service provider device on respective channels of the another circuit.

40. (previously presented) A communications network switch capable of establishing a circuit switched connection for the transport of packets comprises:

a plurality of through channels capable of carrying packet streams through the switch;

a plurality of adaptation devices for adapting incoming traffic data flows to respective packet streams and supplying said streams to respective through channels;

a switch element for replicating a packet stream on a selected through channel and communicating the replicated packet stream to another channel; and

a circuit for receiving said replicated packet stream, said circuit being arranged to process said replicated packet stream and to generate in response to said

processing service data relating to traffic data of said replicated packet stream and to provide said service data in a packet stream to said switch element for switching into said packet stream carried on said selected through channel.

41. (previously presented) A switch as claimed in claim 40, wherein each respective packet stream on a through channel comprises a call between a source device and a destination device and wherein the step of replicating a stream of packets includes only performing replication of that stream of packets in association with an activity of a call comprising said stream of packets.

42. (previously presented) A switch as claimed in claim 41, wherein replication of a stream of packets is performed in association with a call activity comprising one of tone reception/generation, facsimile demodulation, echo cancellation and call announcement generation.

43. (previously presented) A switch as claimed in claim 40, wherein the another channel comprises a packet mode channel which connects the through channel whose packet stream is being replicated to the circuit for receiving said replicated packet stream, said circuit comprising a network service provider device.

44. (previously presented) A switch as claimed in claim 43, wherein said network service provider device comprises a voice processing device.

45. (previously presented) A switch as claimed in claim 44, wherein the voice processing device is co-located with the switch.

46. (previously presented) A switch as claimed in claim 40, wherein the switch element for replicating the packet stream communicates the replicated packet stream to a plurality of other channels.

47. (previously presented) A switch as claimed in claim 40, wherein traffic data is carried bi-directionally on said circuit switched connection by first and second packet streams on respective first and second channels of said plurality of through channels and said switching element replicates each of said first and second packet streams and supplies the replicated packet streams to respective connecting channels.

48. (previously presented) A method of replicating communications traffic data on a communications circuit between a source device and a destination device, comprises the steps of:

providing a communications circuit between said source device and said destination device through a switch fabric, said circuit comprising a packet stream channel in said switch fabric;

providing a packet mode channel connecting said through channel to a network service provider device located within said switch fabric;

replicating a stream of packets carried on said through channel;

supplying said replicated packet stream to the network service provider device;

processing said replicated packet stream at said network service provider device and generating in response to said processing service data relating to said traffic data;

providing said service data in a packet stream to a switching element for switching into said stream of packets being carried on said through channel.

49. (previously presented) A method as claimed in claim 48, wherein said stream of packets on said through channel comprises a call between the source device and the destination device and wherein the step of replicating the stream of packets includes only performing replication of the stream of packets in association with a call activity.

50. (previously presented) A method as claimed in claim 49, wherein replication of the stream of packets is performed in association with a call activity comprising one of tone reception/generation, facsimile demodulation, echo cancellation and call announcement generation.

51 (previously presented) A method as claimed in claim 48, wherein the step of replicating traffic comprises replicating traffic carried bi-directionally between the source device and the destination device by first and second packet streams on respective first and second channels and communicating each of the replicated first and second packet streams to the network service provider device on respective connecting channels.

52. (previously presented) A method as claimed in claim 48, wherein the communication circuit comprises a time division multiplexed (TDM) portion and a packet mode portion and the method includes the steps of:

converting an incoming traffic data flow from a TDM mode to a packetised mode;

inputting a stream of packets containing said traffic data flow to the switching element;

transporting said packet stream between an input and an output of the switching element; and

replicating said packet stream within the switching element.

53. (previously presented) A method as claimed in claim 48, wherein the step of supplying the replicated packet stream to a network service provider device comprises supplying said replicated stream of packets to a voice processing device.

54. (previously presented) A method of replicating a traffic packet stream in a circuit switched communications network comprises the steps of:

providing a circuit switched connection between a source device and a destination device through a network switch fabric;

transporting traffic on a packet mode portion of said circuit switched connection as a stream of packets;

replicating said stream of packets at said packet mode portion of the circuit switched connection;

supplying said replicated stream of packets to another circuit located at said packet mode portion of the circuit switched connection, said another circuit comprising a service provider circuit;

processing said replicated packet stream at said service provider circuit and generating in response to said processing service data relating to said traffic data;

providing said service data in a packet stream to a switching element for switching into said stream of packets being carried on said packet mode portion.

55. (previously presented) A method as claimed in claim 54, wherein said stream of packets on said packet mode portion comprises a call between the source device and the destination device and wherein the step of replicating the stream of packets includes only performing replication of the stream of packets in association with a call activity.

56. (previously presented) A method as claimed in claim 55, wherein replication of the stream of packets is performed in association with a call activity comprising one of tone reception/generation, facsimile demodulation, echo cancellation and call announcement generation.

57. (previously presented) A method as claimed in claim 54, wherein said step of replicating the stream of packets is performed by a switching element.

58. (previously presented) A method as claimed in claim 54, wherein said replicated stream of packets is communicated to said network service provider device on a packet mode circuit connecting the network service provider device to the packet mode portion of the circuit switched connection.

59. (previously presented) A method as claimed in claim 58, wherein the step of supplying the replicated packet stream to a network service provider device comprises supplying said replicated stream of packets to a voice processing device.

60. (previously presented) A method as claimed in claim 54, wherein the step of replicating traffic comprises replicating traffic data carried bi-directionally between the source device and the destination device by first and second packet streams on respective first and second channels of the packet mode portion of the circuit switched connection and supplying each of the replicated first and second packet streams to respective channels of the another circuit.

61 and 62. (cancelled).

63. (previously presented) A telecommunications system according to claim 17, wherein the network service provider device is arranged to generate the service data in accordance with a pre-determined set of service provision rules stored internally in the network service provider device.

64. (previously presented) A method according to claim 46, wherein the network service provider device generates the service data in accordance with a pre-determined set of service provision rules stored internally in the network service provider device.